

Exhibit B

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2 USPQ2d 1437

In re Chupp

U.S. Court of Appeals Federal Circuit

No.86-1631

Decided April 15, 1987

816 F2d 643

Headnotes**PATENTS****[1] Patentability/Validity -- Obviousness -- Evidence of (► 115.0903)**

Patent and Trademark Office Board of Patent Appeals and Interferences improperly rejected claimed herbicidal compound for obviousness under 35 USC 103, since there is no set number of crops on which compound's superiority must be shown, and since compound's superior activity on quackgrass and yellow nutsedge in corn and soybeans is sufficient to rebut prima facie case of obviousness.

Case History and Disposition

Appeal from the Patent and Trademark Office, Board of Patent Appeals and Interferences.

Application for patent, Serial No. 358,967, by John P. Chupp. From decision affirming examiner's final rejection of claims 1 and 12, applicant appeals. Reversed.

Attorneys

Dale H. Hoscheit, and Banner, Birch, McKie & Beckett, both of Washington, D.C. (William I. Address, St. Louis, Mo., on the brief) for appellant.

Richard E. Schafer, associate solicitor, Office of the Solicitor (Joseph F. Nakamura, solicitor, and Fred E. McKelvey, deputy solicitor, on the brief) for Patent and Trademark Office.

Judge

Before Markey, Chief Judge, Friedman, Circuit Judge, and Re, Chief Judge (U.S. Court of International Trade, sitting by designation).

Opinion Text**Opinion By:**

Markey, Chief Judge.

Appeal from a decision of the United States Patent and Trademark Office (PTO) Board of Patent Appeals and Interferences (board), affirming the examiner's final rejection of claims 1 and 12 in application Serial No. 358,967 under 35 U.S.C. §103. We reverse.

BACKGROUND

On March 17, 1982, John P. Chupp (Chupp) filed a continuation-in-part application, assigned to Monsanto Company, entitled "Herbicidal 2-Haloacetanilides." The application contained 41 claims to a

variety of chemical compounds within the generic class of 2-haloacetanilides, a method for using the compounds to combat weeds in crops, and an herbicidal composition containing a 2-haloacetanilide.

The examiner rejected all claims under 35 U.S.C. §§102(a) and 103, stating that the references, including Swiss patents 579,348 (issued July 31, 1976) and 585,191 (issued January 15, 1977) (Swiss patents), rendered the claimed compounds, methods and compositions *prima facie* obvious.

Chupp canceled all but eleven claims and limited the remaining claims to a single compound, N-(ethoxy *methyl*)-2'-trifluoromethyl-6'-methyl-2-chloroacetanilide. That compound differs by a single methylene group (-CH₂-) from the closest prior art compound, N-(ethoxy *ethyl*)-2'-trifluoromethyl-6'-methyl-2-chloroacetanilide, disclosed in the Swiss patents. Chupp apparently did not challenge the examiner's conclusion that the Swiss patents rendered the claimed compound *prima facie* obvious.

To rebut the *prima facie* case of obviousness, Chupp submitted a declaration discussing the results of tests comparing the herbicidal activity of the claimed compound with that of the closest prior art compounds and with two commercial herbicides. The tests compared the compounds' ability to control two weeds, quackgrass and yellow nutsedge, in two crops, corn and soybeans. It is undisputed that the claimed compound gave superior results, exhibiting selectivity factors (crop safety combined with weed-killing activity) at least five times greater than those of the closest prior art compounds. The declarant concluded "the herbicidal properties of the compound of the invention herein are unquestionably outstandingly superior to those of the relevant prior art; the unexpected and unpredictable magnitude of superiority is evidenced by the many-fold increase in unit activity against weeds and high crop safety."

The examiner finally rejected all claims under 35 U.S.C. §103 as being unpatentable over the Swiss patents, saying that comparative testing using only two weeds and two crops was insufficient to establish unexpected herbicidal activity.

Chupp submitted two more declarations. The first presented data from a second comparative test of the claimed compound and the closest prior art compounds, again comparing their ability to control quackgrass and yellow nutsedge in corn and soybeans. The second declaration, from Dr. F. W. Slife, a University of Illinois agronomy professor, analyzed the results of both comparative tests and praised "the superior performance of the invention compound vis-a-vis the prior art compounds as completely unexpected considering the close chemical structure of the test compounds."

The examiner allowed claims 36 and 37 for a method of combatting weeds in corn and soybeans using the claimed compound, but continued to reject the remaining claims. The examiner said that more extensive comparative testing was needed because the data disclosed in the specification showed the claimed compound would not be superior to prior art compounds for crops other than corn and soybeans.

Chupp appealed the rejection to the board, canceling all remaining rejected claims except 1 and 12. Claim 1 sets forth the compound and its structure. Claim 12 sets forth an "[h]erbicidal composition comprising an adjuvant and a herbicidally effective amount of the compound" and the compound's structure.

The board *affirmed* the rejection of claims 1 and 12, holding that Chupp's evidence was

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insufficient to rebut the *prima facie* case of obviousness. The board said the claimed compound had no new selective herbicides, so it was no surprise that the claimed compound was also a selective herbicide. * Prior art herbicides were useful in many crops; the specification data showed that the claimed compound was at best a run-of-the-mill performer in crops other than corn and soybeans. The board held that because the claims were limited to no particular weed or crop, "the showing is not fairly representative of that which is encompassed by the claims." Therefore, concluded the board, the evidence of superiority in corn and soybeans could not rebut the *prima facie* obviousness of the "invention as a whole".

* An herbicide is "selective" if it controls weeds without injuring the crop.

The board further stated that Swiss patent 579,348 taught that N-alkoxy *methyl* chloroacetanilides (like the claimed compound) were superior in activity to the corresponding N-alkoxy *ethyl* chloroacetanilides (like the closest prior art compound). Thus, said the board, "the results shown by appellant in his declaration are only those which would have been expected."

ISSUE

Whether the board erred in sustaining the rejection of claims 1 and 12.

It is undisputed that the claimed compound is novel. That its superior activity in corn and soybeans is a new and unexpected property is confirmed by the allowance of the method claims to its use on corn and soybeans. See *In re McLamore*, 379 F.2d 985, 988-90, 154 USPQ 114, 117-18 (CCPA 1967) (the grant of method claims persuasive of compound's nonobviousness).

Chupp argues that this case is controlled by *In re Papesch*, 315 F.2d 381, 137 USPQ 43 (CCPA 1963), and the line of cases following it. In *Papesch*, one of our predecessor courts reversed a rejection of claims to compounds structurally similar to a prior art compound, but which unexpectedly possessed antiinflammatory properties. The *Papesch* court held, "From the standpoint of patent law, a compound and all of its properties are inseparable; they are one and the same thing." 315 F.2d at 391, 137 USPQ at 51. Under the *Papesch* doctrine, evidence of unobvious or unexpected advantageous properties may rebut a *prima facie* case of obviousness based on structural similarities. *Id.* at 386-87, 137 USPQ at 48. Such evidence may include data showing that a compound is unexpectedly superior in a property it shares with prior art compounds. *E.g.*, *In re Lunsford*, 357 F.2d 380, 148 USPQ 716 (CCPA 1966). Chupp says the undisputed evidence that the claimed compound possesses superior herbicidal activity on quackgrass and yellow nutsedge in corn and soybeans shows that the compound possesses unobvious and unexpected advantageous properties rebutting the *prima facie* case of obviousness.

The Solicitor counters that, under 35 U.S.C. §103, a compound is patentable only if its "subject matter as a whole" would not have been obvious at the time the compound was made. The Solicitor, like the board, maintains that *Papesch* does not help Chupp because the claimed compound possesses no new or unexpected property; it possesses the same property as the prior art compounds, i.e., selective herbicidal activity. The Solicitor dismisses the claimed compound's superiority in respect of corn and soybeans, saying its herbicidal utility in other crops, which the Solicitor argues represents its properties "as a whole", is only so-so.

We do not agree with the Solicitor's construction of *Papesch*. *Papesch* held that a compound can be patented on the basis of its properties; it did not hold that those properties must produce superior results in every environment in which the compound may be used. To be patentable, a compound need not excel over prior art compounds in all common properties. See *United States v. Ciba-Geigy Corp.*, 508 F.Supp. 1157, 1169, 211 USPQ 529, 535-36 (D.N.J. 1979). Evidence that a compound is unexpectedly superior in one of a spectrum of common properties, as here, can be enough to rebut a *prima facie* case of obviousness. *In re Ackermann*, 444 F.2d 1172, 1176, 170 USPQ 340, 343 (CCPA 1971).

The Solicitor urges that *In re Payne*, 606 F.2d 303, 203 USPQ 245 (CCPA 1979), directs a contrary holding. We disagree. In *Payne*, the Court of Customs and Patent Appeals said the mere submission of some evidence that a new compound possesses some unpredictable properties does not require an automatic conclusion of nonobviousness in every case. 606 F.2d at 316, 203 USPQ at 256-57; see also *In re de Montmollin*, 344 F.2d 976, 979, 145 USPQ 416, 417 (CCPA 1965). The *Payne* court held that the evidence submitted in that case was *insufficient* to rebut a *prima facie* case of obviousness, because the claimed compound

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was compared with too few prior art compounds. 606 F.2d at 316, 203 USPQ at 256-57. That is not the situation in this case.

In *Ackermann*, the Court of Customs and Patent Appeals rejected an argument similar to the one the PTO advances here. *Ackermann* sought to patent an optical brightener compound. To rebut a *prima facie* case of obviousness, *Ackermann* submitted evidence that the claimed compound was ten times more effective on polyester fibers than were the closest prior art compounds. The specification stated, however, that the claimed compound could be used as an optical brightener on a variety of materials. In affirming the examiner's rejection, the board said that the evidence of superiority on polyester fibers did not support the breadth of the claim, which covered the compound for all brightening purposes. The Court of Customs and Patent Appeals *reversed*, holding that the evidence of superiority on polyester fibers "pertain[ed] to the full extent of subject matter being claimed" (i.e., the compound per se), and was enough to show that the compound possessed an unexpected difference in properties over the prior art. 444 F.2d at 1176, 170 USPQ at 343. That reasoning is fully applicable to this case.

The Solicitor contends, as above indicated, that the evidence demonstrating the claimed compound's superior performance in corn and soybeans does not show an *unexpected* difference in properties

because the Swiss patents teach that similar compounds would be selective herbicides, and the comparative tests therefore show only what would reasonably have been predicted. The properties of a compound, however, may include an unexpectedly superior performance of the selective herbicidal activity. *E.g.*, *Lunsford*, 357 F.2d at 384, 148 USPQ at 720.

The evidence of record does not support the Solicitor's assertion that the claimed compound's properties are what would have been expected. The Swiss patents teach that their N-alkoxy *ethyl* compounds are superior to N-alkoxy *methyl* chloroacetanilides, contrary to the view of agronomists. Dr. Slife's declaration forcefully states, "I find no evidence in the cited Swiss patents which would lead me to expect that a novel compound such as that claimed herein [an N-alkoxymethyl chloroacetanilide] would have the superior properties it has exhibited." See *In re Blondel*, 499 F.2d 1311, 182 USPQ 294 (CCPA 1974) (reversing rejection of claims to compounds which prior art suggested would have longer-lasting pharmacological activity, where actual increase was beyond reasonable expectations).

The rejection here, though couched in §103 language, resolves itself into one based on "undue breadth," the PTO's concern being that a claim to the compound would forestall its use by others on crops other than corn and soybeans, even though such use would produce no more satisfactory, or even less satisfactory, results. The PTO's concern is misplaced. There is no set number of crops on which superiority must be shown, and the expectation that persons would want to use the compound to produce inferior results (or would want to fight lawsuits over such uses) is false. One of this court's predecessors pointed out the impropriety of "undue breadth" rejections long ago. *E.g.*, *Ackermann*, 444 F.2d at 1176, 170 USPQ at 343; *In re Ruschig*, 343 F.2d 965, 978-79, 145 USPQ 274, 285-86 (CCPA 1965).

CONCLUSION

[1] Chupp's evidence that the claimed compound possesses superior herbicidal activity on quackgrass and yellow nutsedge in corn and soybeans is sufficient to rebut the *prima facie* case of obviousness. We conclude that the claimed subject matter would not have been obvious to one of ordinary skill in the art at the time the invention was made. The decision of the board affirming the rejection of claims 1 and 12 under 35 U.S.C. §103 is *reversed*.

REVERSED

- End of Case -

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